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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mamiko Nomura

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03/11/2009

OLIFF & BERRIDGE, PLC

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EXAMINER

ONEILL, KARIE AMBER

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

03/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,357	Applicant(s) NOMURA ET AL.	
	Examiner Karie O'Neill	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-31-08</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Applicant's amendment filed on December 23, 2008, was received. None of the claims have been amended. Therefore, Claims 1-17 are pending in this office action.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on June 23, 2008.

Information Disclosure Statement

3. Information disclosure statement (IDS), submitted December 31, 2008, has been received and considered by the examiner.

Claim Rejections - 35 USC § 102

4. The rejection of Claims 1, 4-6, 10-12 and 14-15 under 35 U.S.C. 102(b) as being anticipated by Osada (JP 09-175002) are maintained. The rejection is repeated below for convenience.

With regard to Claim 1, Osada discloses a liquid-absorbent composition, comprising: a powder of a liquid-absorbent crosslinked resin produced by crosslinking a hydrophilic resin including methyl vinyl ether/maleic anhydride copolymer (paragraph 0016) with a polyfunctional isocyanate compound (paragraphs 0012-0013), and a binder resin made of a polyalkylene oxide resin (paragraph 0007, 0017).

With regard to Claims 4, 10 and 14, Osada discloses wherein the polyfunctional isocyanate compound is used in an amount of 0.5 to 2.0 mol per 100 mol of the constituent monomer units of the methyl vinyl ether/maleic anhydride copolymer (paragraphs 0013-0014).

With regard to Claims 5, 11 and 15, Osada discloses wherein the polyfunctional isocyanate compound is a trifunctional isocyanate compound (paragraph 0012).

With regard to Claim 6, Osada discloses in paragraph 0018, a liquid-absorbent sheet, comprising a supporting substrate or base material and formed on one side thereof a liquid-absorbent crosslinked resin layer produced by crosslinking a methyl vinyl ether/maleic anhydride copolymer (paragraph 0016) with a polyfunctional isocyanate compound (paragraphs 0012-0013, 0017).

With regard to Claim 12, Osada discloses a method for manufacturing a liquid-absorbent crosslinked resin, comprising dissolving a methyl vinyl ether/maleic anhydride copolymer in an amount of 3 to 35 wt% (paragraph 0016) in a solvent such as methyl ethyl ketone with an SP value of 9 to 14 (paragraph 0017), and adding a polyfunctional isocyanate compound to this solution to perform a crosslinking reaction (paragraphs 0012 and 0017).

Claim Rejections - 35 USC § 103

5. The rejection of Claims 2-3, 9 and 13 under 35 U.S.C. 103(a) as being unpatentable over Osada (JP 09-175002), as applied to Claims 1,4-6, 10-12 and 14-15

Art Unit: 1795

above, and in view of Koike (US 6,306,414 B1), is maintained. The rejection is repeated below for convenience.

Osada discloses a liquid absorbent composition in paragraph 4 above, but does not disclose wherein said powder has an average particle diameter of 0.1 to 150 μm , and wherein said methyl vinyl ether/maleic anhydride copolymer has a weight average molecular weight of 50,000 to 1,200,000.

Koike discloses an absorptive polymer which can absorb other hydrophobic substances, the polymer including a methyl vinyl ether/maleic anhydride copolymer having a molecular weight of about 100,000 to 300,000 (column 5 lines 42-47 and column 6 lines 17-23) and an average particle diameter of not greater than 10 μm , preferably 0.1-5 μm (column 7 lines 40-56). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use a methyl vinyl ether/maleic anhydride copolymer with a specific molecular weight and particle diameter in the composition of Osada, because Koike teaches that the methyl vinyl ether/maleic anhydride copolymer is water absorptive, has a low viscosity and excellent dispersibility in water and has long term stability (abstract).

6. The rejection of Claims 7-8, 16 and 17 under 35 U.S.C. 103(a) as being unpatentable over Osada (JP 09-175002), as applied to Claims 1,4-6, 10-12 and 14-15 above, and in view of Sato (JP 2001-351588), is maintained. The rejection is repeated below for convenience.

Art Unit: 1795

Osada discloses a liquid absorbent composition in paragraph 4 above, but does not disclose a non-aqueous electrolyte battery pack, comprising a battery case and disposed within the battery case a non-aqueous electrolyte battery cell, a wiring circuit board, and an electrolyte absorption member for absorbing electrolyte in the event that electrolyte leaks from a non-aqueous electrolyte battery cell. Osada also does not disclose wherein an adhesive layer is formed on the other side of the supporting substrate and said liquid absorbent resin layer contains a pressure sensitive adhesive.

Sato discloses in the abstract, a non-aqueous electrolyte battery pack, comprising a battery case and disposed within the battery case a non-aqueous electrolyte battery cell, a wiring circuit board, and an electrolyte absorption member for absorbing electrolyte in the event that electrolyte leaks from a non-aqueous electrolyte battery cell. Sato teaches the electrolyte absorption member being made from an absorbent resin, namely a water absorbing polymer (paragraph 0014), for example isobutylene-maleic acid copolymer absorptivity resin (paragraph 0018). Sato also discloses a pressure sensitive adhesive sheet stuck to one side of a top face plate and the liquid adsorption member is on the inside of the top face plate. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an electrolyte absorption member comprising the liquid absorbent copolymer composition of Osada, because Sato teaches when electrolytic solution leaks out from the cell, the electrolytic solution can avoid contaminating, short circuiting and corroding the wiring by arranging the liquid absorption member in the location which will absorb the leaked electrolytic solution (paragraphs 0005 and 0026).

Response to Arguments

7. Applicant's arguments filed December 23, 2008, have been fully considered but they are not persuasive.

Applicant's primary argument is that "Osada does not describe a composition including a powder that is a crosslinked methyl vinyl ether/maleic anhydride copolymer." Applicant notes that "Osada describes a resin composition for ink-jet recording material. Osada describes methyl vinyl ether/maleic anhydride copolymer used as a hydrophilic resin (Osada, paragraph [0016]), but describes crosslinking only of polyalkylene oxide resin and isocyanate (Osada, paragraph [0009]). Conversely, independent claims 1, 6 and 12 specifically recite a composition comprising a powder of a crosslinked resin produced by crosslinking a methyl vinyl ether/maleic anhydride copolymer with a polyfunctional isocyanate compound, and a binder resin."

Examiner first asserts that the claim is a product claim; i.e. a liquid absorbent composition. The claim limitation, "produced by crosslinking" is a process within the product claim, making this a product by process claim. MPEP 2113 states, "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."

Therefore, Examiner maintains the 35 U.S.C. 102(b) rejection above because Osada

Art Unit: 1795

discloses the final end product, a liquid absorbent composition, regardless of the manner in which it was produced. Each of the claimed materials for the liquid absorbent composition is disclosed in the Osada reference, which can be seen in paragraph 4 above. And each of the materials claimed, a methyl vinyl ether/maleic anhydride copolymer which is meltable resin in an organic solvent, a polyfunctional isocyanate compound and a binder resin of polyalkylene oxide, are mixed together to form the end product.

Applicant further asserts that the secondary references Koike and Sato, fail to remedy the deficiencies of Osada. However, Applicant is making a piecemeal argument with respect to the secondary reference and is not addressing the combination of references applied in the rejection. As noted in the rejection, Osada teaches a composition including a powder that is a crosslinked methyl vinyl ether/maleic anhydride copolymer meltable resin, with a binder. Thus, the primary reference teaches the claim limitation.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1795

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571)272-8614. The examiner can normally be reached on Monday-Friday from 8 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Ruthkosky/
Primary Examiner, Art Unit 1795

Karie O'Neill
Examiner
Art Unit 1795

KAO